

DISPLAY DEVICE LIGHT LEAKAGE COMPENSATION

ABSTRACT

The invention relates to techniques for light leakage compensation in a multi-channel display device. The invention may be particularly useful in calculating single-channel emission spectra for liquid crystal displays (LCD). In order to accurately model and calibrate a display device, an accurate spectral output estimate for each of the individual color channels is needed. The invention provides techniques to compensate for light leakage from adjacent color channels that cause hue shifts in the images reconstructed by the display device. In accordance with the invention, a light leakage emission spectrum can be determined for each color channel of a display based on a measured emission spectrum for the display at a minimum level and assumed emission spectra for light sources in the display. A single-channel emission spectrum is the difference between a cumulative color channel emission spectrum measurement and the light leakage spectra of adjacent color channels.